

11.4.2 Report the results of the audit samples and the compliance determination samples along with their identification numbers, and the analyst's name to the responsible enforcement authority. Include this information with reports of any subsequent compliance analyses for the same enforcement authority during the 30-day period.

12.0 Data Analysis and Calculations

12.1 Nomenclature.

A_b = Area under the water blank response curve, counts.
 A_c = Area under the calibration response curve, counts.
 A_s = Area under the sample response curve, counts.
 C = Concentration of volatile organics in the sample, ppmw.
 C_c = Concentration of carbon, as methane, in the calibration gas, mg/L.
 C_{ch} = Concentration of chloride in the calibration gas, mg/L.
 C_j = VO concentration of phase j, ppmw.
 DR_t = Average daily response factor of the FID, mg CH_4 /counts.
 DR_{th} = Average daily response factor of the ELCD, mg Cl^- /counts.

F_j = Weight fraction of phase j present in the waste.
 m_c = Mass of carbon, as methane, in a calibration run, mg.
 m_{ch} = Mass of chloride in a calibration run, mg.
 m_s = Mass of the waste sample, g.
 m_{sc} = Mass of carbon, as methane, in the sample, mg.
 m_{sf} = Mass of sample container and waste sample, g.
 m_{sh} = Mass of chloride in the sample, mg.
 m_{st} = Mass of sample container prior to sampling, g.
 m_{vo} = Mass of volatile organics in the sample, mg.
 n = Total number of phases present in the waste.
 P_p = Percent propane in calibration gas (L/L).
 P_{vc} = Percent 1,1-dichloroethylene in calibration gas (L/L).
 Q_c = Flow rate of calibration gas, L/min.
 t_c = Length of time standard gas is delivered to the analyzer, min.
 W = Weighted average VO concentration, ppmw.

12.2 Concentration of Carbon, as Methane, in the Calibration Gas.

$$C_c = (19.681 \times P_p) + (13.121 \times P_{vc}) \quad \text{Eq. 25D-1}$$

12.3 Concentration of Chloride in the Calibration Gas.

$$C_{ch} = 28.998 \times P_{vc} \quad \text{Eq. 25D-2}$$

12.4 Mass of Carbon, as Methane, in a Calibration Run.

$$M_c = C_c \times Q_c \times t_c \quad \text{Eq. 25D-3}$$

12.5 Mass of Chloride in a Calibration Run.

$$m_{ch} = C_{ch} \times Q_c \times t_c \quad \text{Eq. 25D-4}$$

12.6 FID Response Factor, mg/counts.

$$DR_t = \frac{m_c}{A_c} \quad \text{Eq. 25D-5}$$

12.7 ELCD Response Factor, mg/counts.

$$DR_{th} = \frac{m_{ch}}{A_c} \quad \text{Eq. 25D-6}$$

12.8 Mass of Carbon in the Sample.

$$m_{sc} = DR_t (A_s - A_b) \quad \text{Eq. 25D-7}$$

12.9 Mass of Chloride in the Sample.

$$m_{sh} = DR_{th} (A_s - A_b) \quad \text{Eq. 25D-8}$$

12.10 Mass of Volatile Organics in the Sample.

$$m_{vo} = m_{sc} + m_{sh} \quad \text{Eq. 25D-9}$$

12.11 Relative Standard Deviation.

$$RSD = \frac{100}{\bar{x}} \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n-1}} \quad \text{Eq. 25D-10}$$

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12.12 Mass of Sample.

$$m_s = m_{sf} - m_{st} \quad \text{Eq. 25D-11}$$

12.13 Concentration of Volatile Organics in Waste.

$$C = \frac{(m_{vo} \times 1000)}{m_s} \quad \text{Eq. 25D-12}$$

12.14 Weighted Average VO Concentration of Multi-phase Waste.

$$W = \sum_{j=1}^n F_j \times \bar{C}_j \quad \text{Eq. 25D-13}$$

13.0 Method Performance. [Reserved]

14.0 Pollution Prevention. [Reserved]

15.0 Waste Management. [Reserved]

16.0 References

1. "Test Methods for Evaluating Solid Waste, Physical/Chemistry Methods", U.S. Environmental Protection Agency. Publication SW-846, 3rd Edition, November 1986 as amended by Update I, November 1990.

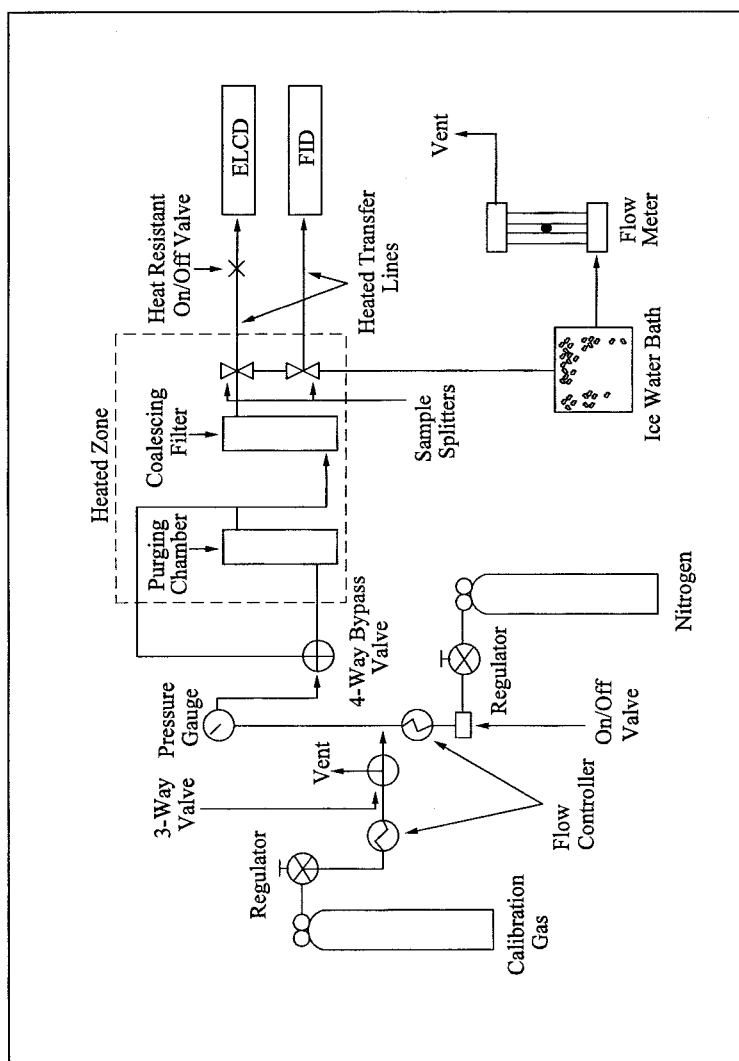


Figure 25D-1. Schematic of Purging Apparatus.